

alfalfa with NDF levels in the low to mid-30s?

In case you haven't noticed, alfalfa harvested the first half of June has been making very rapid progress: we can't recall seeing the stuff regrow as fast as it has this year. Keep track of it, might be ready to harvest pretty soon. Last year we used a much more intensive harvest interval, 33 days between first and second cut, 41-42 days between second and third, and were very pleased with the results. Our alfalfa made it through the winter in great shape, aided greatly by a good snow cover. Yields were about the same as last year. We see no reason to change to a more conservative harvest schedule, and will again start mowing second cut in the bud stage.

Ev Thomas

## PSNT

That's pre-sidedress nitrate tests. We started using these soil analyses this year, sampling five corn fields about six weeks after planting when the corn was 6-12" tall. We had a variety of soil types and field histories; muck, clay loam, and gravel loam, second and third year corn, fall manure and no manure, alfalfa sod and grass sod. We submitted the dried samples, taken from the top 12" rather than the plow layer as for normal soil tests, to the UVM lab. Within 24 hours we had the results faxed to us, cost per sample \$5.00.

The results were somewhat surprising, indicating that we needed to apply more manure than indicated by the

recommendations based on fall soil analyses. These recommendations are based mostly on field history, and certainly aren't as reliable as PSNT, which is why Cornell is among an increasing number of universities promoting PSNT as the best indication of N needs. We had three sets of N recommendations: Cornell's based on field history, UVM's based on their PSNT, and Penn State's based on a PSNT formula they just started using.

Of the five fields, there was agreement on only one, a third-year field which hasn't had manure in several years. The three universities recommended 130-155# of N/acre for this field. Two fields which had 4000 gallons/A of dairy manure last fall had low N recommendations (30#/A) from Cornell, but 60-100#/A based on the PSNT-based recommendations from UVM and Penn State. The 60# rate is based on a yield goal of 120 bu/A, while the 100# rate is based on 150 bu/A. The muck soil with no manure in 1993-94 also had considerable variation in N recommendations, Cornell at 70# and PSNT at 100#-120#, but this is partly due to our yield goal of 120 bu/A for the muck, considerably higher than the Cornell system assumes. The past two years we averaged 110 bu/A on that field, so a 120-bushel yield goal seems reasonable.

On balance, it appears that we may have been placing too much value on the slurry manure we apply in the fall. Our PSNT levels ranged from 3 to 13, very low numbers considering our history of manure use, but that's why we did the tests. While it's a bit of a pain to take samples to a 12" depth, we found it

well worth the effort, and will use PSNT again in 1995.

Ev Thomas

## ALFALFA FOR SALE

Our silos are full and we have a lot of second cut alfalfa looking for a home. If you're interested, contact Ev. He'll be gone until July 13, but you can leave a message at the office, 518-846-7121. Ev's extension is 15, if you want to leave a message on his answering machine. We'll sell it windrowed for you to chop, or chopped into your wagons, or standing as long as you mow it in the bud stage. We also have alfalfa hay crop silage and corn silage for sale at reasonable prices, and should have third cut alfalfa for sale later in the summer.

## Mississippi Phosphorus Sabbatical in New York

I will be at The Miner Institute on Sabbatical leave from Mississippi State University for six months until December. Although currently living in Mississippi, I grew up in Massachusetts and received all my education in the Northeast, (University of Maine and University of New Hampshire). My wife's family is near Glens Falls (actually, Gansevoort) so I am no stranger to New York.

Mississippi has millions of broilers and tons of chicken litter which need disposing. Heavy manure applications can lead to soil build up of phosphorus and other nutrients which can make their way into streams and

lakes. When a body of water becomes nutrient rich it provides a perfect growing medium for algae and other plant life. The water quality decreases and agricultural "non point" runoff gets the blame.

All across the country from Mississippi to New York and elsewhere, farms are being asked to change their production habits by reducing their input of nutrients from fertilizers and manure. Proper manure management includes application to hay fields (including alfalfa) and row crops such as corn. Most phosphorus is tied up in the soil bound to aluminum, iron, or calcium minerals. Phosphorus and nitrogen can make their way to streams and lake through surface runoff in the sediment or in the water flow through tile drainage.

My sabbatical at The Miner Institute will be devoted to studying ways to reduce phosphorus movement in the water and sediment that moves off agricultural fields. I look forward to my stay at the Miner Institute!

David Lang

## SILO PLASTIC UPDATE

In an earlier issue we commented on the preferred color for silo plastic. Agriculture Canada recently reported on a research project comparing black vs. white plastic. Grass was ensiled at 30% DM, with half the silage covered with white plastic and the other half with black plastic. While black plastic is cheaper, white plastic was found to cause less heating. The top foot of